IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

In re the Application of:

Kenichiro SAKAI et al.

Serial No. 09/819,703   Group Art Unit: 2628

Confirmation No. 4089

Filed: March 29, 2001   Examiner: Hau H. Nguyen

For: IMAGE DISPLAY DEVICE AND DATA WRITING METHOD IN IMAGE DISPLAY
       DEVICE

APPEAL BRIEF

Commissioner for Patents
PO Box 1450
Alexandria, VA 22313-1450

Sir:

I. Real Party in Interest

The inventors, Kenichiro SAKAI and Tsugio NODA assigned all rights in the subject application to FUJITSU LIMITED. on March 1, 2001 according to the Assignment executed March 1, 2001 and submitted for recordation on March 27, 2001 which is recorded at Reel 11654, Frames 521-522. Therefore, the real party in interest is FUJITSU LIMITED.

II. Related Appeals and Interferences

There are no related appeals or interferences known to Appellants, Appellants' legal representatives or the Assignee, FUJITSU LIMITED, which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

III. Status of Claims

Claims 1-5 and 7-15 are pending in the application, because claim 6 was canceled. Claims 1-5 and 7-15 stand rejected under 35 USC § 103(a), the rejection of which is being appealed.

IV. Status of Amendments

No Amendment was filed in response to the March 15, 2007 Office Action.

V. Summary of Claimed Subject Matter

Claim 1

As recited in claim 1, the present invention includes an "image display device for storing a plurality of images and displaying an image based on a user's display operation" (claim 1, lines 1-2) as described, for example at page 7, line 23 to page 16, line 1 of the specification and illustrated in Figs. 2 and 3. The image display device includes "a non-volatile storage unit storing data which can be rewritten and maintaining stored data even if a main power supply is switched off" (claim 1, lines 3-4) as described, for example, at page 8, lines 5-7 and page 15, lines 3-14 of the specification and represented by non-volatile storage unit 11 in Fig. 2 and flash memory 32 in Fig. 3 (also referenced using numeral 33 at page 15, line 14).

Claim 1 also recites "an image storage unit storing an image" (claim 1, line 3) as described, for example, at page 9, lines 7-9 and page 15, lines 13-14 of the specification and represented by image storage unit 21 in Fig. 2 (also referenced using numeral 11 at page 9, line 11) and flash memory 32 in Fig. 3.

Claim 1 also recites "an image display unit displaying the image stored in the image storage unit" (claim 1, line 4) as described, for example, at page 8, line 23 to page 9, line 3 and page 15, lines 18-20 of the specification and represented by image display unit 16 in Fig. 2 and MPU core 311, LCD control unit 314 and LCD display 34 in Fig. 3.

Claim 1 also recites "an operation detection unit detecting a user's display operation to modify a display state of the image displayed on the image display unit" (claim 1, lines 5-6) as described, for example, at page 8, line 9 to page 9, line 3 and page 15, lines 14-16 of the specification and represented by operation detection unit 12 in Fig. 2 and I/O control unit 312 in Fig. 3.

Claim 1 also recites

a display information writing unit writing display information for indicating a display state, including a displayed position and magnification, of a currently displayed image in the non-volatile storage unit corresponding to one of the plurality of images based on a detection result of the operation detection unit if the display information is not already stored in the non-volatile storage unit

(claim 1, last 5 lines) as described, for example, at page 8, lines 16-23; page 10, lines 20-25; page 14, lines 8-13; page 15, lines 17-20; and page 21, line 25 to page 22, line 5 of the

2

specification and represented by display information writing unit 14 in Fig. 2 and MPU core 311 in Fig. 3.

Claim 11

Claim 11 is directed to an "image display device for storing images and displaying at least one of the images based on a user's display operation" (claim 11, lines 1-2) as described, for example at page 7, line 23 to page 16, line 1 of the specification and illustrated in Figs. 2 and 3. The image display device includes "a non-volatile storage unit storing data corresponding to the images which can be rewritten and maintaining stored data even if a main power supply is switched off" (claim 1, lines 3-4), as described, for example, at page 8, lines 5-7 and page 15, lines 3-14 of the specification and represented by non-volatile storage unit 11 in Fig. 2 and flash memory 32 in Fig. 3 (also referenced using numeral 33 at page 15, line 14).

Claim 11 also recites

a display information writing unit writing display information for indicating a display state, including a displayed position and magnification, of a currently displayed image corresponding to one of the images in said non-volatile storage unit if a main power supply is switched off if the display information is not already stored in the non-volatile storage unit

(claim 1, last 5 lines) as described, for example, at page 8, lines 16-23; page 10, lines 9-12 and 20-25; page 13, lines 15-19; page 14, lines 8-13; page 15, lines 17-20; page 21, line 25 to page 22, line 5 of the specification and represented by display information writing unit 14 in Fig. 2 and MPU core 311 in Fig. 3.

Claim 12 - Means-Plus-Function Limitations

Claim 12 is directed to an "image display device for storing images and displaying at least one of the images based on a user's display operation" (claim 12, lines 1-2) as described, for example at page 7, line 23 to page 16, line 1 of the specification and illustrated in Figs. 2 and 3. The image display device includes "non-volatile storage means for storing data corresponding to the images which can be rewritten and maintaining stored data even if a main power supply is switched off" (claim 12, lines 3-4). In the embodiment described at page 14, line 24 to page 15, line 22 of the specification and illustrated in Fig. 3, the functions recited in claim 12 as being performed by the non-volatile storage means are performed by flash memory 32 (see page 15, lines 13-14 of the specification).

Claim 12 also recites "image storage means for storing an image" (claim 12, line 5). In the embodiment described at page 14, line 24 to page 15, line 22 of the specification and

illustrated in Fig. 3, the functions recited in claim 12 as being performed by the image storage means are performed by flash memory 32 (see page 15, lines 13-14 of the specification).

Claim 12 also recites "image display means for displaying the image stored in the image storage means" (claim 12, line 6). In the embodiment described at page 14, line 24 to page 15, line 22 of the specification and illustrated in Fig. 3, the functions recited in claim 12 as being performed by the image display means are performed by MPU core 311, LCD control unit 314 and LCD display 34 (see page 15, lines 18-22 of the specification).

Claim 12 also recites "operation detection means for detecting a user's display operation to modify a display state of the image displayed on the image display means" (claim 12, lines 7-8). In the embodiment described at page 14, line 24 to page 15, line 22 of the specification and illustrated in Fig. 3, the functions recited in claim 12 as being performed by the operation detection means are performed by I/O control unit 312 (see page 15, lines 14-16 and page 8, line 9 to page 9, line 3 of the specification).

Claim 12 also recites

> display information writing means for writing display information for indicating a display state, including a displayed position and mag-nification, of a currently displayed image corresponding to one of the images in the non-volatile storage means based on a detection result of the operation detection means

(claim 12, last 4 lines). In the embodiment described at page 14, line 24 to page 15, line 22 of the specification and illustrated in Fig. 3, the functions recited in claim 12 as being performed by the display information writing means are performed by MPU core 311 (see page 15, lines 17-20; page 8, lines 16-23; page 10, lines 20-25; page 14, lines 8-13; and page 21, line 25 to page 22, line 5 of the specification).

Claim 13 - Means-Plus-Function Limitations

Claim 13 is directed to an "image display device for storing images and displaying at least one of the image based on a user's display operation" (claim 13, lines 1-2) as described, for example at page 7, line 23 to page 16, line 1 of the specification and illustrated in Figs. 2 and 3. The image display device includes "non-volatile storage means for storing data corresponding to the images which can be rewritten and maintaining stored data even if a main power supply is switched off" (claim 13, lines 3-4). In the embodiment described at page 14, line 24 to page 15, line 22 of the specification and illustrated in Fig. 3, the functions recited in claim 13 as being performed by the non-volatile storage means are performed by flash memory 32.

Claim 13 also recites

> display information writing means for writing display information for
> indicating a display state, including a displayed position and
> magnification, of a currently displayed image corresponding to one
> of the images in said non-volatile storage unit if a main power
> supply is switched off and if the display information is not already
> stored in the non-volatile storage unit

(claim 13, last 4 lines). In the embodiment described at page 14, line 24 to page 15, line 22 of the specification and illustrated in Fig. 3, the functions recited in claim 13 as being performed by the display information writing means are performed by MPU core 311 (see page 15, lines 17-20; page 8, lines 16-23; page 10, lines 9-12 and 20-25; page 13, lines 15-19; page 14, lines 8-13; and page 21, line 25 to page 22, line 5 of the specification).

Claim 14

Claim 14 is directed to a "method for writing a display state of an image in an image display device for storing images and displaying the image based on a user's display operation in a non-volatile storage unit for maintaining stored data even if power is switched off" (claim 14, lines 1-3) as described, for example, on pages 19-29 of the specification and represented by the flowcharts in Figs. 6-10. This method includes "displaying a stored image" (claim 14, line 5) as described, for example, at page 26, lines 9-11 of the specification and represented by block S35 in Fig. 8.

The method recited in claim 14 also includes "detecting a user's display operation to modify a display state of the stored image" (claim 14, line 6) as described, for example, at page 22, lines 16-19 of the specification and represented by block S11 in Fig. 7.

The method recited in claim 14 also includes "writing display information for indicating a display state, including a displayed position and magnification, of a currently displayed image corresponding to one of the images based on a result of the detecting if the display information is not already stored in the non-volatile storage unit" (claim 14, last 4 lines) as described, for example, at page 24, lines 4-7 and page 29, lines 1-16 of the specification and represented by block S18 in Fig. 7 and blocks S53 and S54 in Fig. 10.

Claim 15

Claim 15 is directed to a "method for recording display states of images displayed by an image display device" (claim 15, lines 1-2) as described, for example, on pages 19-29 of the specification and represented by the flowcharts in Figs. 6-10. This method includes "detecting a

5

display state of a currently displayed image stored in a non-volatile storage unit" (claim 15, lines 3-4) as described, for example, at page 20, line 1 to page 21, line 4 of the specification and represented by blocks S3-S5 in Fig. 6.

> The method recited in claim 15 also includes
>
> writing display state information indicating the display state, including a displayed position and magnification, of the currently displayed image corresponding to one of the images in the non-volatile storage unit if the display state information is not already stored in the non-volatile storage unit

(claim 15, last 4 lines) as described, for example, at page 21, lines 9-16 and page 29, lines 1-16 of the specification and represented by blocks S6 in Fig. 6 and blocks S53 and S54 in Fig. 10.

VI. Grounds of Rejection to be Reviewed on Appeal

In the final Office Action dated March 15, 2007, the Examiner rejected claims 1-5 and 7-15 under 35 USC § 103(a) as unpatentable over U.S. Patents 6,335,729 to Nunokawa et al. (Reference B in the April 14, 2005 Office Action) and 6,529,218 to Ogawa et al. (Reference A in the June 16, 2006 Office Action) At issue is whether Nunokawa et al. and Ogawa et al. suggest all of the limitations recited in the claims.

VII. Argument

In item 2 on pages 2-4 of the March 15, 2007 Office Action, claims 1-5 and 7-15 were rejected under 35 USC § 103(a) as unpatentable over Nunokawa et al. in view of Ogawa et al.

While Nunokawa et al. and Ogawa et al. are similar to the present invention in that both are directed to the display of images or text, there are significant differences. The system disclosed by Nunokawa et al. is a navigation system for an automobile and has an object of displaying "a map ... based on information read from a recording medium after a short reading time ... [from] activation of the apparatus" (column 3, lines 26-28). As illustrated in Fig. 3 and described in columns 5 and 6, when power is turned off (step 109) "the map data for generating the map display screen currently displayed on the display 15 (... [which] is stored in the image data memory 17) is transferred to and stored in the data saving memory 18" (column 6, lines 21-24). When the system is turned on, "the map screen data saved in the memory 18 is read out ... and ... supplied to the display 15" (column 5, lines 48-51).

It was acknowledged on page 3, lines 6-8 of the March 15, 2007 Office Action that Nunokawa et al. does not disclose any "writing [of] display information for indicating a display state" (Office Action, page 3, lines 7-8). However, it was asserted that Ogawa et al. discloses

this feature and that it would be obvious to combine the device disclosed by Ogawa et al. with Nunokawa et al. For the reasons discussed below, it is submitted that no such feature is taught or suggested by the combination of Nunokawa et al. and Ogawa et al.

Claim 1

In rejecting the claims, the Examiner cited column 8, lines 17-21 and column 10, line 61 to column 11, line 3 of Nunokawa et al. which describe storing "control data for the recording medium … in the non-volatile storage" (column 10, lines 61-66) which is not the "map data itself …, [but rather] other data in the map disk … may be saved in the data saving memory 18 to reduce waiting time" (column 8, lines 17-21). This "other data" is described as "control information (TOC, disk label, etc.) of the disk" (column 8, lines 31-32). It is submitted that such data is not equivalent to and does not suggest storing "display information for indicating a display state, including a displayed position, of a currently displayed image" (claim 1, lines 9-10), because the information that is stored or written according to the present invention changes in response to operations performed by the user, while Nunokawa et al. teaches storing data that never changes, so that "information including track numbers, duration of pieces of music … [can be] displayed on the display" (column 8, lines 47-49).

In other words, Nunokawa et al. simply discloses saving a copy of the image that was previously displayed in data storage memory 18, so that the image can be quickly redisplayed when the system is turned back on without the time required to obtain the image from the disk. In contrast to the present invention, Nunokawa et al. teaches against relying on "display information for indicating a display state" (claim 1, line 9) written in a "non-volatile storage unit" (claim 1, lines 10-11). The present invention is not directed to saving the image data itself, but rather information regarding how the image is displayed. This significantly reduces the amount of information required to be stored and is useful for more than quickly displaying a previously displayed image, as discussed below.

With respect to Ogawa et al., claim 1 recites that the display information writing unit writes "display information for indicating a display state, including a displayed position and magnification, of a currently displayed image" (claim 1, lines 9-10). The only information stored for a currently displayed image that has been cited or found in Ogawa et al. is "the positional coordinates of map information" (column 5, lines 10-11). Considering the acknowledgement that Nunokawa et al. does not disclose any "writing [of] display information for indicating a display state" (Office Action, page 3, lines 7-8), the combination of Nunokawa et al. and Ogawa et al. lack any suggestion that the magnification of a currently displayed image is stored.

7

In response to the statements in the preceding paragraph, the March 15, 2007 Office Action cited block 118 in Fig. 2; "Menu 29" in Fig. 5 ; column 6, lines 20-24; column 8, lines 42-46; and Fig. 6 of Ogawa et al. as allegedly "teach[ing] the display state includes magnification" (e.g., March 15, 2007 Office Action , page 4, line 18) in addition to the previous citation of "Fig. 2, steps S103-S109, col. 5, lines 5-35" (March 15, 2007 Office Action, page 3, lines 12-13) of Ogawa et al. as disclosing "writing display information indicating a display state" (Office Action , page 3, line 12).

The portions of Ogawa et al. cited as allegedly disclosing "writing display information for indicating a display state" (claim 1, line 9) describe the display of a menu for an enlarging/redu-cing process and the performance of enlarging/reducing based on instructions from a user. Specifically, Figs. 5 and 6 and the cited portions of columns 6 and 8 of Ogawa et al. disclose using a menu to enlarge and reduce the scale of the map and contain no suggestion of storing what is input by the using the menu prior to turning off the power. Although block 118 in Fig. 2 shows a test for scaling the map after it is decided in block 107 that power is not to be turned off, the description at column 6, lines 20-24 states that what is being checked in block 118 is not stored data, but "the instruction, which has been input through the key input device 31" (column 6, lines 20-21). In summary, nothing has been found in any of the cited portions of Ogawa et al. that discloses or suggests "writing display (state) information ... including … magnification … if the display (state) information is not already stored in the non-volatile storage unit" (claim 1, last 5 lines).

Furthermore, the claimed invention provides several benefits that are not suggested by either Nunokawa et al. or Ogawa et al.   First, each of a plurality of images that were previously displayed can be displayed with the same characteristics, e.g., "'display size' ... [and] 'display position'" (Application, page 18, line 12-13) with which they were previously displayed without storing the entire image. Since Nunokawa et al. is directed to a navigation system, contrary to attempting to display information from a disc in the same way that it was displayed the last time the disc was accessed, "[o]nce the display of a map is thus activated, a process of updating a determined current position is carried out ... and [w]hen the displayed range of the map must be scrolled as a result of the movement of the position, the map data for the relevant area is read from the map disc ... and the relevant map is displayed on the display" (column 6, lines 1-9). Thus, with respect to this feature also, Nunokawa et al. teaches changing what is displayed when the device is turned back on and therefore, teaches away from the present invention.

Nothing has been cited in Ogawa et al. that suggests modifying Nunokawa et al. to meet the limitations recited in claim 1.

For the above reasons, it is submitted that claim 1, as well as claims 2-4 and 5-10 which recite additional distinctions, as discussed below, patentably distinguish over Nunokawa et al. in view of Ogawa et al.

Claims 2-4

Claim 2 adds subsequently "reading the display information from said non-volatile storage unit when power is switched on" (claim 2, lines 2-3), so that "the image display unit displays the image based on the display information" (claim 2, last two lines). This clarifies that the device recited in claim 1 provides a benefit not provided by the combination of Nunokawa et al. and Ogawa et al. Therefore, it is submitted that claim 2, as well as claims 3 and 4 which depend therefrom, further patentably distinguish over Nunokawa et al. and Ogawa et al.

Claim 5

In rejecting claim 5, the March 15, 2007 Office Action asserted that Nunokawa et al. disclosed

> if said operation detection unit does not detect another user's display operation
> during a specific time period after detecting a user's display operation, said
> display information writing unit writes the display information in said non-volatile
> storage unit

(claim 5, lines 1-4) by what is done "in the parking lot when the car is not moving" (March 15, 2007 Office Action, page 4, lines 8-9), but did not cite where this is taught by Nunokawa et al. and did not describe what in Nunokawa et al. allegedly corresponds to "an operation detection unit detecting a user's display operation to modify a display state of the image displayed on the image display unit" (claim 1, lines 7-8) that enables the features recited in claim 5 to be performed. The fact that a vehicle is sitting in the parking lot merely means that the vehicle is not moving, not that the operator is not modifying a display of a device in the vehicle. For example, the operator might be stopped in the parking lot to try to locate precisely where the vehicle is located or where something nearby can be found relative to the vehicle's position as displayed on the device. For the above reasons, it is submitted that claim 5 further patentably distinguishes over Nunokawa et al. and Ogawa et al.

Claims 7 and 8

The March 15, 2007 Office Action did not separately address claims 7 and 8. It is not clear from the discussion of claim 1 on pages 2-3 what in Nunokawa et al. and Ogawa et al. the Examiner believes discloses that "said display information writing unit independently stores the

display information for each stored image" (claim 7, lines 1-2), given that claim 1 from which claim 7 depends recites "display information … [as] indicating a display state, including a displayed position and magnification" (claim 1, lines 9-10). As a result, it is submitted that claim 7, as well as claim 8 which depends therefrom, further patentably distinguish over Nunokawa et al. and Ogawa et al.

Claim 9

In rejecting claim 9, the March 15, 2007 Office Action asserted that column 4, lines 15-38 of Nunokawa et al. disclosed "the display information includes at least one of information for specifying an original image, information about magnification of a display image and information for indicating a position in the original image of a display image" (claim 9, lines 1-4). However, the bulk (lines 23-38) of this portion of column 4 in Nunokawa et al. only discusses how the device described in Nunokawa et al. is turned off (not what, if anything, is written when it is turned off). The most relevant discussing in this portion of Nunokawa et al. to what is recited in claim 9 is that "when a road map is to be displayed, the display range, the display scale and the display direction of the map can be set through the operation of the operating unit 19" (column 38, lines 19-22). However, nothing in this portion or any other portion of Nunokawa et al. or Ogawa et al. has been found that suggests "the display range, the display scale and the display direction of the map" are stored along with "a displayed position and magnification, of a currently displayed image in the non-volatile storage unit … based on a detection result of the operation detection unit if the display information is not already stored in the non-volatile storage unit" as recited in the last 4 lines of claim 1 from which claim 9 depends. Therefore, it is submitted that claim 9 further patentably distinguishes over Nunokawa et al. and Ogawa et al.

Claim 10

The March 15, 2007 Office Action also did not separately address claim 10. Appellants have not found anything in the discussion of claim 1 on pages 2-3 indicating what in Nunokawa et al. and Ogawa et al. the Examiner believes discloses that "if a user switches a main power supply off, said display information writing unit writes the display information in said non-volatile storage unit" (claim 10, lines 1-3), again, noting that claim 1 from which claim 7 depends recites "display information … [as] indicating a display state, including a displayed position and magnification" (claim 1, lines 9-10). As a result, it is submitted that claim 10 further patentably distinguishes over Nunokawa et al. and Ogawa et al.

10

Claim 11

Claim 11 recites "a display information writing unit writing display information ... including ... magnification ... in ... non-volatile storage ... if a main power supply is switched off" (claim 11, last 4 lines). As discussed above with respect to claims 1 and 10, this feature has not been found in either of <u>Nunokawa et al.</u> and <u>Ogawa et al.</u> Therefore, it is submitted that claim 11 patentably distinguishes over <u>Nunokawa et al.</u> and <u>Ogawa et al.</u>

Claim 12

Claim 12 recites "display information writing means for writing display information ... including ... magnification ... in ... non-volatile storage ... based on" (claim 12, lines 9-11) "detecting a user's display operation to modify a display state of the image displayed" (claim 12, lines 7-8). As discussed above with respect to claim 1, this feature has not been found in either of <u>Nunokawa et al.</u> and <u>Ogawa et al.</u> Therefore, it is submitted that claim 12 patentably distinguishes over <u>Nunokawa et al.</u> and <u>Ogawa et al.</u>

Claim 13

Claim 13 recites "display information writing means for writing display information ... including ... magnification ... in ... non-volatile storage ... if a main power supply is switched off" (claim 13, last 4 lines). As discussed above with respect to claims 1, 10 and 11, this feature has not been found in either of <u>Nunokawa et al.</u> and <u>Ogawa et al.</u> Therefore, it is submitted that claim 13 patentably distinguishes over <u>Nunokawa et al.</u> and <u>Ogawa et al.</u>

Claim 14

Claim 14 recites "writing display information ... including ... magnification ... in the non-volatile storage unit if the display information is not already stored in the non-volatile storage unit" (claim 14, last 4 lines). As discussed above with respect to claim 1, this feature has not been found in either of <u>Nunokawa et al.</u> and <u>Ogawa et al.</u> Therefore, it is submitted that claim 14 patentably distinguishes over <u>Nunokawa et al.</u> and <u>Ogawa et al.</u>

Claim 15

Claim 15 recites "writing display state information ... including ... magnification ... in the non-volatile storage unit if the display state information is not already stored in the non-volatile storage unit" (claim 15, last 4 lines). As discussed above with respect to claim 1, this feature has not been found in either of <u>Nunokawa et al.</u> and <u>Ogawa et al.</u> Therefore, it is submitted that claim 14 patentably distinguishes over <u>Nunokawa et al.</u> and <u>Ogawa et al.</u>

Summary of Arguments

In short, it is appears the rejections in the March 15, 2007 Office Action are not substantiated by the references that have been cited in support of the rejection.

For the reasons set forth above, it is submitted that claims 1-5 and 7-15 patentably distinguish over <u>Nunokawa et al.</u> and <u>Ogawa et al.</u> Thus, it is respectfully submitted that the Examiner's final rejection of the claims is without support and, therefore, erroneous. Accordingly, the Board of Patent Appeals and Interferences is respectfully urged to so find and to reverse the Examiner's final rejection.

Please charge the required fee in the amount of $510.00 to our Deposit Account No. 19-3935. If any additional fees are required, please charge same to our Deposit Account No. 19-3935.

Respectfully submitted,

STAAS & HALSEY LLP

Date: November 30, 2007   By: /Richard A. Gollhofer/
                                         Richard A. Gollhofer
                                         Registration No. 31,106

1201 New York Avenue, NW, Suite 700
Washington, D.C. 20005
Telephone: (202) 434-1500
Facsimile: (202) 434-1501

VIII. Claims Appendix

1. An image display device for storing a plurality of images and displaying an image based on a user's display operation, comprising:

a non-volatile storage unit storing data which can be rewritten and maintaining stored data even if a main power supply is switched off;

an image storage unit storing an image;

an image display unit displaying the image stored in the image storage unit;

an operation detection unit detecting a user's display operation to modify a display state of the image displayed on the image display unit; and

a display information writing unit writing display information for indicating a display state, including a displayed position and magnification, of a currently displayed image in the non-volatile storage unit corresponding to one of the plurality of images based on a detection result of the operation detection unit if the display information is not already stored in the non-volatile storage unit.

2. The image display device according to claim 1,

further comprising a display information reading unit reading the display information from said non-volatile storage unit when power is switched on, and

wherein the image display unit displays the image based on the display information read by the display information reading unit.

3. The image display device according to claim 2, wherein if the display information read from said non-volatile storage unit is not a prescribed value, said display information reading unit modifies the display information to a prescribed rating value.

4. The image display device according to claim 2, wherein said display information writing unit stores currently displayed display image data in said non-volatile storage unit, said display reading unit reads the display image data as well as the display information if the display image data are stored in said non-volatile storage unit and said image display unit displays an original image using the read display image data.

13

5. The image display device according to claim 1, wherein if said operation detection unit does not detect another user's display operation during a specific time period after detecting a user's display operation, said display information writing unit writes the display information in said non-volatile storage unit.

7. The image display device according to claim 1, wherein said display information writing unit independently stores the display information for each stored image.

8. The image display device according to claim 7, wherein when a display image is switched, said display information reading unit reads the display information corresponding to the display image.

9. The image display device according to claim 1, wherein the display information includes at least one of information for specifying an original image, information about magnification of a display image and information for indicating a position in the original image of a display image.

10. The image display device according to claim 1, wherein if a user switches a main power supply off, said display information writing unit writes the display information in said non-volatile storage unit.

11. An image display device for storing images and displaying at least one of the images based on a user's display operation, comprising:
a non-volatile storage unit storing data corresponding to the images which can be rewritten and maintaining stored data even if a main power supply is switched off; and
a display information writing unit writing display information for indicating a display state, including a displayed position and magnification, of a currently displayed image corresponding to one of the images in said non-volatile storage unit if a main power supply is switched off if the display information is not already stored in the non-volatile storage unit.

12. An image display device for storing images and displaying at least one of the images based on a user's display operation, comprising:

    non-volatile storage means for storing data corresponding to the images which can be rewritten and maintaining stored data even if a main power supply is switched off;

    image storage means for storing an image;

    image display means for displaying the image stored in the image storage means;

    operation detection means for detecting a user's display operation to modify a display state of the image displayed on the image display means; and

    display information writing means for writing display information for indicating a display state, including a displayed position and magnification, of a currently displayed image corresponding to one of the images in the non-volatile storage means based on a detection result of the operation detection means.

13. An image display device for storing images and displaying at least one of the image based on a user's display operation, comprising:

    non-volatile storage means for storing data corresponding to the images which can be rewritten and maintaining stored data even if a main power supply is switched off; and

    display information writing means for writing display information for indicating a display state, including a displayed position and magnification, of a currently displayed image corresponding to one of the images in said non-volatile storage unit if a main power supply is switched off and if the display information is not already stored in the non-volatile storage unit.

14. A method for writing a display state of an image in an image display device for storing images and displaying the image based on a user's display operation in a non-volatile storage unit for maintaining stored data even if power is switched off, comprising:

    displaying a stored image;

    detecting a user's display operation to modify a display state of the stored image; and

    writing display information for indicating a display state, including a displayed position and magnification, of a currently displayed image corresponding to one of the images based on a result of the detecting if the display information is not already stored in the non-volatile storage unit.

15. A method for recording display states of images displayed by an image display device, comprising:

detecting a display state of a currently displayed image stored in a non-volatile storage unit; and

writing display state information indicating the display state, including a displayed position and magnification, of the currently displayed image corresponding to one of the images in the non-volatile storage unit if the display state information is not already stored in the non-volatile storage unit.

IX. Evidence Appendix

(None)

X. Related Proceedings Appendix

(None)